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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/522,434

Applicant(s)

RICHTER ET AL.

Examiner

MICHAEL SHANNON

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2009.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-32 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 16 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/5508)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Status of the Claims

1. Claims 1-32 are currently pending in this application.

Information Disclosure Statement

2. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings, as submitted, contain handwritten labels and reference numbers which are, in some cases, illegible. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

a. In Figure 2, user end device or terminal "2" is not properly labeled (as identified on page 21 of the description);

b. In Figure 2, "input unit 18" is not labeled (as identified on page 21 of the description); and,

c. In Figures 4 and 5, signal receiver "28" is not properly labeled (as identified on pages 26 and 28 of the description).

5. The drawings are objected to because:

a. In Figure 1, "skin contact" 4 should be more properly labeled as "coupling unit" 4 or "coupling device" 4, "body electrode" 6 should be more properly labeled as

"contact region" 6, and reference number 10 should be labeled as "output unit" (as identified on pages 18 and 19 of the description);

b. In Figure 2, "mixer" 14 should be labeled as "modulator" 14, and "computer unit" 16 should be labeled as "configurator" 16, because the latter terms are used more consistently throughout the description;

c. In Figure 5, reference number 50 should be labeled as "switch" (as identified on page 30 of the description), and reference number 54 should be labeled as "loss timer" (as identified on page 31 of the description); and,

d. In Figure 8, some reference numbers are labeled with corresponding names and some are not. For consistency, all or none of the reference numbers should be labeled with names.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract is not currently limited to a single paragraph on a separate sheet because the applicant merely submitted a copy of the front page of the international application publication. In addition, the abstract currently includes the legal phraseology "means". Appropriate correction is required.

7. The disclosure is objected to because of the following informalities:

- a. On page 17, line 8, "FIG. 9b" is incorrectly identified as "FIG. 9";
- b. On page 21, line 16, the examiner believes that "RON" should be "ROM";
- c. Page 21, line 20 indicates "a memory not shown"; however, memory 20 is shown in Fig. 2;
- d. On page 23, line 12, configurator 16 is incorrectly identified as "configurator 12";

- e. On page 23, line 14, modulator 14 is incorrectly identified as "modulator 16";
- f. On page 24, Table 1 is incorrectly labeled at the bottom as "FIG. 1";
- g. On page 26, line 21, FIG. 4 is incorrectly identified as "FIG. 2";
- h. On page 28, line 3, sound decoder 36 is incorrectly identified as "sound decoder 30";
- i. On page 30, line 11, comparator 48 is incorrectly identified as "operator 48";
- j. Page 30 lines 22-23 indicate "a timer not shown"; however, Fig. 5 shows loss timer 54;
- k. On page 32, line 1, signal receiver 28 is incorrectly identified as "signal receiver 20";
- l. On page 34, line 11, memory 28 is identified with the same reference number as previously defined signal receiver 28;
- m. In Table 3, Table 3, the examiner believes that column 6, row 6 would be more correctly identified as "yes", and column 6, row 8 would be more correctly identified as "no";
- n. On page 40, line 9, grip unit 105 is incorrectly identified as "grip unit 5";
- o. On page 40, line 25, pressure sensitive zone 108 is incorrectly identified as "pressure sensitive zone 8";
- p. On page 41, line 10, fluid chamber system 9 is incorrectly identified as "fluid chamber system 9";

- q. On page 41, lines 23-24, grip device 105 is incorrectly labeled as "grip device 5";
 - r. On page 42, lines 4-5, signal transmission device 115 is incorrectly labeled as "signal transmission device 15"
 - s. On page 42, lines 24-25, compensating chamber 114 is incorrectly identified as "compensation chamber 112";
 - t. On page 42, line 25, the examiner believes that "Both chambers 113, 114" should be "Both chambers 109, 112";
 - u. On page 43, lines 6-7, decoder device 117 is incorrectly identified as "decoder device 17";
 - v. On page 43, line 8, control signal line 118 is incorrectly identified as "control signal line 18";
 - w. On page 43, lines 9-10 input signal line 119 is incorrectly identified as "input signal line 19";
 - x. On page 43, line 23, power control unit 104 is incorrectly identified as "power control unit 4";
 - y. On page 44, lines 11-12, pressure sensitive zone 108 is incorrectly identified as "pressure sensitive zone 8"; and,
 - z. On page 45, line 15, electric motor 103 is incorrectly identified as "electric motor 3".
- Appropriate correction is required.

Claim Objections

8. Claims 10-11 and 13-14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form.

a. Claim 10 claims a subset of the same limitations which were already defined in claim 1, from which it depends.

b. Claim 11 claims a user end device or terminal according to claim 2; however, the user end device or terminal has already been defined in claim 1 and further defined in claim 2, which depends on claim 1.

c. Claim 13 claims a signal receiver for use with the system according to claim 1; however, a signal receiver has already been defined in claim 1.

d. Claim 14 claims the signal receiver according to claim 5; however the signal receiver has already been defined in claim 1 and further defined in claim 5, which depends on claim 1.

9. Claims 6, 17-18, 28-29 and 31 are objected to because of the following informalities:

a. In claim 6, line 2 the examiner believes that "means" should be inserted after "interface" to be consistent with line 10 of claim 1;

b. In claim 17, line 6, the examiner believes that "a" should be inserted before "hand of the user";

c. In claim 18, line 2, it is unclear which surface that "the surface" is referring to, since an outer surface and an inner surface are defined in claim 17, from which this claim depends. For the purpose of examination, the examiner believes that the applicant is referring to the outer surface of the hand grip;

d. In claim 28, lines 3-4, the examiner believes that there is a typographical error, and that "wherein the output means is *in* the body" should be changed to "wherein the output means is *on* the body" (emphasis added). The examiner could not find support in the disclosure for an output means in the body.

e. In claim 29, line 2, the examiner believes that "wherein" should be inserted before "the output means";

f. In claim 31, lines 2-3, the examiner believes that there is a typographical error and that the word "so" should appear after "modulated", rather than before "modulated".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 8, 15-17, 21-23, and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Regarding claim 8, it is unclear whether the signal receiver is equipped and programmed with new access data, or for testing previously-stored access data. For the purpose of examination, the claim will be interpreted to mean that the signal receiver is equipped to test already stored access data as authorization data.

b. Regarding claim 15, the phrase "for example" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

c. Regarding claim 16, the phrase "or the like" renders the claims indefinite because the claims includes elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

d. Claim 17 recites the limitation "constituting **the authorizing** at least one of the authorizing data signals" (emphasis added) in lines 12-14. There is insufficient antecedent basis for this limitation in the claim. The specific action of "authorizing" has not been previously defined; and, only an authorizing data signal has been defined.

e. Claims 21-23 recite the limitation "wherein the pressure chamber is...". There is insufficient antecedent basis for these limitations in the claim. A pressure chamber has not been previously defined; rather, only a "fluid chamber system" has been defined in claim 19, from which these claims depend. The examiner will treat claims 21-23 as referring to the fluid chamber system of claim 19 for the purpose of examination.

f. Regarding Claim 31, it is unclear whether the applicant is referring to a "dated" telegram, which does not appear to be described in the disclosure; or, a data telegram, which can be information indicative of the hand grip status, as exemplified in the disclosure. For the purpose of examination, the claim will be interpreted as referring to a data telegram.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-2, 4, and 7-13, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman (U.S. Patent 6,861,944 B1) in view of de la Huerga (U.S. Patent 5,960,085).

a. Regarding Claim 1, Hoepelman teaches the following limitations:

"A system for preventing accidents in the operation of a monitored machine or apparatus carried by a user" (Column 1, lines 7-12 and lines 41-46, where securing authorization is considered to be a method of preventing accidents, and firearm is considered to be an apparatus carried by a user);

"at least one user end device or terminal with output means for transmitting authorizing user data signals through the body of the user" (Column 2, lines 3-7 and Column 2, line 66- Column 3, line 11 where the *transmitter-side chip* corresponds to the

"user end device or terminal", the *transmitter* of line 8 corresponds to the "output means", and the *personal code data* corresponds to authorization data);

"at least one signal receiver assigned to the monitored apparatus or machine" (Column 3, lines 45-52 and Figure 2 where the "signal receiver" comprises all of reference number **22, 24-26, 28, 30, and 32**);

"interface means for receiving the authorizing data signals transmitted through the body of the user" (Column 3, lines 45-56 where the *receiving electrode 22* functions as the "interface means");

"means for testing the received data signals" (Column 2, lines 10-12 and Column 3, lines 57-61 where the *controller 24* provides the "means for testing" and a comparison is considered a form of testing); and,

"means for outputting a clearance signal that allows operation of the monitored machine or apparatus after a successful test of the received authorizing user data" (Column 3, lines 61-67 where the *output signal 28* is the "clearance signal").

While Hoepelman teaches "the clearance signal following a successful test of the authorization data" as described above, Hoepelman does not specifically teach "means for terminating output" of the clearance signal following a successful test of the authorization data, "when subsequent tests of the authorization data fail." However, de la Hueriga (Column 4, line 40 - Column 5, line 11) discloses an authentication system using wireless information exchange where verification of a system user is intermittently performed. If authenticated using a verification system, the user is logged-on to the system; and subsequently, if the authentication signal is not received, the user is

logged-off (where log-in status is considered to be a form of clearance to use a system or device). Thus, in effect, inability to receive authentication data would be tantamount to an unsuccessful verification test of that data. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of de la Huerga in the teachings of Hoepelman in order to maximize the security of the device (de la Huerga, Column 6, lines 31-37).

b. Regarding Claim 2, Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above. Hoepelman further teaches: wherein the output means of the user end device or terminal "comprises coupling means for the inductive or capacitive coupling of the authorizing user data signal into the body of the user." (Column 2, lines 12-20 and Column 4, lines 14-15 where the first *electrode* functions as the "coupling means")

c. Regarding Claim 4: "The system according to claim 1 in which the user end device or terminal is equipped and programmed to transmit signals comprising a code giving authorization to the user and control commands for controlling the signal receiver." Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above. While Hoepelman does not specifically disclose transmission of control commands, in addition to the authorization codes, for controlling the signal receiver, it would have been obvious to one of ordinary skill in the art, that additional commands could be transmitted. For instance, the transmission signal could include an authorization code as well as a command to unlock the monitored device. However,

Hoepelman performs both of these functions as part of the authorization process, which is a more efficient way of operating the system.

d. Regarding Claim 7, Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above, including "the means of the signal receiver for testing the authorizing data signal". Hoepelman further teaches storage associated with the signal receiver (Column 1, lines 26-29 and Column 4, lines 47-53, where the *storage area 25* functions as a "correspondence register") which can store at least two data element (Column 5, lines 49-55 and Figure 1). While Hoepelman discloses storing personal code data and shooting time, it would have been obvious to one of ordinary skill in the art at the time of the invention, that both locations could be dedicated to personal code, or authorization data; thus, meeting the limitation of "a correspondence register with at least two storage or memory locations or data for testing the authorizing data signal."

e. Regarding Claim 8: "The system according to claim 1 wherein the signal receiver is equipped and programmed depending upon the signal received from the user end device or terminal to access data for testing the data to serve as authorization data." Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above. Hoepelman implicitly teaches the limitations of this claim since, as described in the rejection of claim 1, the signal receiver is capable of testing the data to serve as authorization data; and, the signal receiver would not be equipped to test the data until it receives the corresponding incoming data from the user terminal.

f. Regarding Claim 9, Hoepelman and de la Huerza render obvious the subject matter of claim 1, as described above. Hoepelman further teaches "wherein the user end device is arranged in or on protective clothing." (Column 4, lines 11-15, where safety goggles are considered a form of protective clothing and meet the criteria of this cited passage, and *PAN devices* are as defined in Column 3, lines 21-30)

g. Regarding Claim 10, Hoepelman and de la Huerza render obvious the subject matter of claim 1, as described above. Claim 10 is rejected for the same reasons used in the rejection of claim 1 above, since it reiterates a subset of those limitations.

h. Regarding Claim 11, Hoepelman and de la Huerza render obvious the subject matter of claims 1 and 2, as described above, including the user end device or terminal. Claim 11 is rejected for the same reasons used in the rejection of claims 1 and 2 above, since it recites no further limitation.

i. Regarding Claim 12, Hoepelman and de la Huerza render obvious the subject matter of claims 10, as described above, including the user end device or terminal. Hoepelman further teaches: A user end device or terminal according to claim 10, "for arrangement on or in protective clothing." (Column 4, lines 11-15, where safety goggles are considered a form of protective clothing and meet the criteria of this cited passage, and *PAN devices* are as defined in Column 3, lines 21-30)

j. Regarding Claim 13, Hoepelman and de la Huerza render obvious the subject matter of claim 1, as described above, including a signal receiver. Claim 13 is

rejected for the same reasons used in the rejection of claim 1 above, since it recites no further limitation.

k. Regarding Claim 15, Hoepelman and de la Huerga render obvious the subject matter of claim 10, as described above. Hoepelman further teaches: "Protective clothing, like for example a protective helmet, protective glasses or goggles, safety shoes and the like with the user end device or terminal according to claim 10." (Column 4, lines 11-15, where safety goggles are considered a form of protective clothing and meet the criteria of this cited passage, and *PAN devices* are as defined in Column 3, lines 21-30)

l. Regarding Claim 16, Hoepelman and de la Huerga render obvious the subject matter of claim 13, as described above. Hoepelman further teaches: "A device or apparatus like a household appliance, electric and mechanical tool, machine tool or the like with the signal receiver according to claim 13." (Column 1, lines 6-12 where an electric or mechanical too and certain household appliances could meet the criteria of *dangerous devices*)

14. Claims 3, 5, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman and de la Huerga as applied to claim 1 above, and further in view of Alt et al. (U.S. Patent 6,580,356 B1) .

a. Regarding Claim 3, Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above, including "the output means of the user end device or terminal." Hoepelman does not specifically teach that the output means

has "a contact region for direct coupling of the authorizing user data signal to the body of the user or a signal output for transmitting the authorizing data signals to a device directly connected with the body of the user." However, Alt et al. also teaches personal identification systems which use the human body as the transmission region in which a *personal identification generator* has a *signal transmitter unit 10* which couples the signal to a user through an *electrically conductive surface* (Column 3, lines 16-23 and Column 7, lines 5-11, where the *signal transmitter unit* corresponds to the "output means and the *electrically conductive surface* functions as the "contact region"). This meets the criteria of the first alternative in the limitations of claim 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Alt et al. in the teachings of Hoepelman and de la Huerga in order to provide a personal identification system, or an authorization system which is more efficient, inexpensive, less intrusive and physically interactive, and obviates the need for more complex hardware and/or software (Alt et al., Column 2, lines 47-56).

b. Regarding Claim 5, Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above, including "the interface means of the signal receiver." Hoepelman does not specifically teach that the interface means "comprises contact-sensitive means for receiving the signals from the user end device or terminal upon contact of the contact-sensitive means with the user." However, Alt et al. teaches such an arrangement (Column 4, lines 33-41, where the *electrical contact surface* functions as the "contact-sensitive means", the *signal transmission unit* corresponds to the "user end device", and the *identity recognition system* comprises the

"signal receiver"). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Alt et al. in the teachings of Hoepelman and de la Huerga in order to provide a personal identification system, or an authorization system which is more efficient, inexpensive, less intrusive and physically interactive, and obviates the need for more complex hardware and/or software (Alt et al., Column 2, lines 47-56).

c. Regarding Claim 14, Hoepelman, de la Huerga, and Alt et al. render obvious the subject matter of claim 5, as described above. Claim 14 is rejected for the same reason used in the rejection of claims 1 and 5 above, because it recites no further limitation.

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman and de la Huerga as applied to claim 1 above, and further in view of Gersheneld et al. (U.S. Patent 5,914,701).

Regarding Claim 6, Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above, including "interface of the signal receiver" and "the signals of the user end device or terminal". Hoepelman does not specifically teach that the interface means "has inductive or capacitive means for receiving" the signals of the user end device or terminal "by means of inductive or capacitive signal transmission." However, Gersheneld et al. also teaches a system for signaling that uses induced body current, which includes a *receiver* for detecting the signals by capacitive coupling by means of an *inner electrode 24* (Column 2, lines 1-4 and Column 4, lines 55-58, where the *inner electrode 24* functions as a "capacitive means"). It

would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Gersheneld et al. in the teachings of Hoepelman and de la Huerga in order to avoid interference such as might be encountered using other wireless systems (Gersheneld et al., Column 1, lines 33-40).

16. Claims 17-18, 24-25, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman and de la Huerga as applied to claim 1 above, and further in view of Recce (U.S. Patent 6,563,940 B2).

a. Regarding Claim 17, Hoepelman and de la Huerga render obvious the subject matter of claim 1, as described above, including an authorization control system for a device such as a firearm. Hoepelman does not specifically teach the details of a hand grip of the device. However, Recce also teaches an authorized user prevention device and method, which can include a firearm including:

“a hand grip” (Column 3, lines 3-4);

“having a body including a hand grip outer surface engageable by an inner surface of hand of the user and having a segment forming a hand rest for the inner surface” (Column 4, lines 29-31 and Figure 1);

“in the region of the hand inner surface rest at least one pressure-sensitive zone for generating a signal indicating the hand grip gripping state and constituting the authorizing at least one of the authorizing data signals.” (Column 3, lines 58-59, Column 6, lines 52-59 and Figure 1 where *sensor array 125* comprises “at least one pressure-sensitive zone”; Column 3, lines 21-22 and lines 32-35 where the *pressure*

signature profile corresponds to the "gripping state"; and, Column 3, lines 43-49 which teach that the signal constitutes an "authorizing data signal").

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Recce in the teachings of Hoepelman and de la Huerga in order to provide a second check for authorization of the user of a device which would provide increased security in the case that the user end terminal taught by Hoepelman is accidentally misplaced, or stolen.

b. Regarding Claim 18, Hoepelman, de la Huerga, and Recce render obvious the subject matter of claim 17, as described above. Hoepelman does not specifically teach "wherein the surface has a plurality of the pressure-sensitive zones." However, Recce teaches that the hand grip has a plurality of pressure sensitive zone (Column 3, lines 58-59, Column 6, lines 52-59 and Figure 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Recce in the teachings of Hoepelman and de la Huerga in order to provide a more accurate pressure signature profile than could be provided with just one pressure sensor.

c. Regarding Claim 24, Hoepelman, de la Huerga, and Recce render obvious the subject matter of claim 17, as described above. Hoepelman does not specifically teach "wherein the hand grip in the region of the hand inner surface rest has pressure-sensitive zones in the hand ball rest region and in a finger inner surface rest region." However, Recce teaches that the *array of sensors 125* are provided on all four sides of the handgrip which would include an outline of finger pressure (Column 8, lines

23-27 and Column 7, lines 26-32 where having pressure sensors on all four sides of the hand grip would ensure sensors where the hand ball rests and where the fingers rest). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Recce in the teachings of Hoepelman and de la Hueraga in order to provide a more accurate pressure signature profile than could be provided with just one pressure sensor.

d. Regarding Claim 25, Hoepelman, de la Hueraga, and Recce render obvious the subject matter of claim 17, as described above. Hoepelman does not specifically teach "wherein in the region of the hand grip a plurality of individual finger inner surface pressure-sensitive zones are provided." However, Recce teaches the ability to measure the hand position of the user's hand on the device and pressure as a function of position on the handle, including an outline of the fingers (Column 7, lines 17-32). This suggests the ability to measure the pressure applied by individual fingers. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Recce in the teachings of Hoepelman and de la Hueraga in order to provide a more accurate pressure signature profile than could be provided with just one pressure sensor.

e. Regarding Claim 30, Hoepelman, de la Hueraga, and Recce render obvious the subject matter of claim 17, as described above. Hoepelman further teaches "a signal-modulating device for modulation of" an "authorizing data signal" (Column 3, lines 8-25 where the *resonant tank circuit* functions a "signal-modulating device"). While Hoepelman does not specifically teach the signal coming from a hand grip, there is a

suggestion that the system of Hoepelman could be incorporated in a firearm (Column 1, lines 7-12, where *dangerous devices* could be firearms).

f. Regarding Claim 31, Hoepelman, de la Hueraga, and Recce render obvious the subject matter of claim 17, as described above. Hoepelman further teaches "wherein the signal is so modulated that it contains a dated telegram." Hoepelman teaches the signal modulation as described in the rejection of claim 30 above, and that the signal comprises authorizing data as described in the rejection of claim 1 above. The authorizing data signal is considered to be a "telegram".

17. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman, de la Hueraga, and Recce as applied to claim 17 above, and further in view of Koch (U.S. Patent 3,897,058).

a. Regarding Claim 19, Hoepelman, de la Hueraga, and Recce render obvious the subject matter of claim 17, as described above, including the hand grip. Hoepelman does not specifically teach "wherein the pressure-sensitive zone forms part of a fluid chamber system." However, Koch teaches a *pressure-responsive grip 54* which forms part of a *fluid receiving reservoir 56* (Column 6, lines 5-9). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Koch in the teachings of Hoepelman, de la Hueraga, and Recce in order to provide an alternative way of measuring grip pressure which is potentially less expensive than the piezoelectric crystals taught by Recce.

b. Regarding Claim 20, Hoepelman, de la Hueraga, Recce, and Koch render obvious the subject matter of claim 19, as described above, including "the pressure-sensitive zone". Hoepelman does not specifically teach that the pressure-sensitive zone is "formed by an elastically deformable pressure chamber wall." However, Koch teaches that the *pressure-responsive grip 54* is made of a plastic with *sufficient flexibility to compress easily under external hand pressures* (Column 6, lines 62-66). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Koch in the teachings of Hoepelman, de la Hueraga, and Recce in order to provide an alternative way of measuring grip pressure which is potentially less expensive than the piezoelectric crystals taught by Recce.

c. Regarding Claim 21, Hoepelman, de la Hueraga, Recce, and Koch render obvious the subject matter of claim 19, as described above, including "the pressure chamber". Hoepelman does not specifically teach wherein the pressure chamber is "filled with a liquid, gel or gas." However, it would have been obvious to one of ordinary skill in the art to fill the fluid reservoir taught by Koch, as described in the rejection of claim 19 above, with any suitable liquid, gel or gas which would best meet the demands of the system. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Koch in the teachings of Hoepelman, de la Hueraga, and Recce in order to provide an alternative way of measuring grip pressure which is potentially less expensive than the piezoelectric crystals taught by Recce.

d. Regarding Claim 22, Hoepelman, de la Hueraga, Recce, and Koch render obvious the subject matter of claim 19, as described above, including "the pressure

chamber". Hoepelman does not specifically teach wherein the pressure chamber is "coupled with a switch device." However, Recce teaches a pressure sensitive grip that is coupled to a solenoid for allowing use of the device, and that other types of switches could be used (Column 10, lines 49-57 and Column 11, lines 7-10). The type of grip used to create the pressure profile is not considered essential to the activity of the switch, as long as the pressure profile is authorized. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Recce in the teachings of Hoepelman, de la Huerta, and Koch in order to provide an added measure of safety for the device, because the device could remain in locked state when not in use, and only switched to an unlocked state when use is authorized.

e. Regarding Claim 23, Hoepelman, de la Huerga, Recce, and Koch render obvious the subject matter of claim 19, as described above, including "the pressure chamber". Hoepelman does not specifically teach wherein the pressure chamber is "coupled with a pressure-measurement device." However, Koch teaches coupling of a pressure-responsive grip comprising a fluid reservoir that is coupled to a *pressure indicator and/or recording means* (Column 2, lines 23-31). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Koch in the teachings of Hoepelman, de la Huerga, and Recce in order to provide an added measure of security, because a means for recording grip pressure could provide information for use by law enforcement authorities, subsequent to an attempted unauthorized use of a device, such as a firearm.

18. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman, de la Huerga, and Recce as applied to claim 17 above, and further in view of Meixner et al. (U.S. Patent 5,583,386).

a. Regarding Claim 26, Hoepelman, de la Huerga, and Recce render obvious the subject matter of claim 17, as described above, including the "hand grip". Hoepelman does not specifically teach "an orientation-detecting device" in region of the hand grip. However, Meixner et al. teaches a safety mechanism for electrically operated devices that includes *a position or tilt switch 7* included in the hand grip of a device (Column 2, lines 43-48, Column 5, lines 5-9 and Figure 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Meixner in the teachings of Hoepelman, de la Huerga, and Recce in order to provide increased safety so that the device is only turned on if operated properly; i.e., in the correct position (Meixner et al., Column 3, lines 9-14).

b. Regarding Claim 27, Hoepelman, de la Huerga, and Recce render obvious the subject matter of claim 17, as described above, including the "hand grip". Hoepelman does not specifically teach that the hand grip is "a hand grip of a drill." However, However, Meixner et al. teaches a safety mechanism for electrically operated devices that includes a hand drill with a *hand or pistol grip 2* (Column 4, lines 6-8). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Meixner in the teachings of Hoepelman, de la Huerga, and Recce in order to provide increased safety so that a hand drill is only turned on if operated properly; i.e., in the correct position (Meixner et al., Column 3, lines 9-14).\

19. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman, de la Huerga, and Recce as applied to claim 17 above, and further in view of Alt et al.

Regarding Claim 28, Hoepelman, de la Huerga, and Recce render obvious the subject matter of claim 17, as described above, including a "hand grip" and "output means". Hoepelman does not specifically teach that the output means is "in the body". However, Alt et al. teaches that a transmitter of an authorization signal can be implanted in the body of an individual (Column 11, lines 3-15). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Alt et al. in the teachings of Hoepelman, de la Huerga, and Recce in order to provide increased convenience to the user since the user would not be required to carry an output means on their outer skin or on clothing.

20. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman, de la Huerga, Recce, and Alt et al. as applied to claim 28 above, and further in view of Gersheneld et al..

Regarding Claim 29, Hoepelman, de la Huerga, Recce, and Alt et al. render obvious the subject matter of claim 28, as described above, including the "hand grip and "output means". Hoepelman does not specifically teach that the output means "is so configured that it effects a signal coupling on the basis of electrostatic interaction." However, Gersheneld teaches a system for signaling, using body currents, where the signal is transmitted by means of an electrostatic field (Column 2, lines 9-16). It would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the teachings of Gershenfeld et al. in the teachings of Hoepelman, de la Huerga, Recce, and Alt et al. in order to avoid interference such as might be encountered using other wireless systems (Gershenfeld et al., Column 1, lines 33-40).

21. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoepelman, de la Huerga, and Recce as applied to claim 17 above, and further in view of Karden (U.S. Patent 4,643,263).

Regarding Claim 32, Hoepelman, de la Huerga, and Recce render obvious the subject matter of claim 17, as described above, including "a hand grip" and "a device for detecting the gripping state for producing a signal indicating the gripping state of the tool." Hoepelman does not specifically teach a power tool with "a housing", "a first hand grip", or "a second grip". However, Karden teaches a portable power tool comprising a housing (Column 1, lines 5-9) that can include two handles (Column 2, lines 5-6). It would have been obvious to one of ordinary skill in the art to combine the teachings of Karden in the teachings of Hoepelman, de la Huerga, and Recce in order to extend the authentication and safety features for a hand grip taught by Hoepelman and Recce into a device that contains two handles.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Kumar (U.S. Patent Appl. Pub. 2003/0184430 A1) teaches a system for coupling user to a retail computer system where the signal is capacitively coupled to the wearer's body.
- b. Kohar et al. (U.S. Patent 5,554,979) teaches a system for transferring control signals to various objects and appliances.
- c. Diehl et al. (U.S. Patent Appl. Pub. 2002/0196123 A1) teaches portable locking systems using a portable transmitter.
- d. Fitzgibbon (U.S. Patent 6,414,587 B1) teaches a code learning system for a barrier such as a garage door opener.
- e. David et al. (U.S. Patent 6,832,987 B2) teaches a pressure sensing device for use in monitoring a patient's condition during a medical procedure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL SHANNON whose telephone number is (571)270-7457. The examiner can normally be reached on Monday through Friday, 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin C. Lee can be reached on 571-272-2963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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